

## 11.—THE GENUS CHEILEA IN AUSTRALIAN WATERS.

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(A Contribution from the South Australian Museum.)

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Pritchard and Gatliff<sup>(1)</sup> record *Mitrularia equestris* Linn. from Flinders Victoria, in 1899. Twenty-four years later Hedley<sup>(2)</sup> records *Cheilea undulata* Bolten, remarking "I have seen *C. undulata* from the Sow and Pigs Reef in Sydney Harbour and have gathered it at intervals between the Capricorn Islands and Torres Straits . . . . This seems to be the proper name for a shell erroneously recorded from Australia by various authors as *Calyptraea equestris*."

Tryon,<sup>(3)</sup> after trying to determine what *Mitrularia equestris* Linn. really is, remarks "I have interpreted this species in accordance with general usage, the Linnean species being indeterminable."

However Woodring<sup>(4)</sup> designated *Patella equestris* Linn as type of the genus *Cheilea*.

None of the innumerable synonyms of the so-called tropical *Cheilea equestris* are applicable to the species which occurs along the South Coast of Australia, so that the only course seems to be to describe them as new species.

## CHEILEA UNDULATA Bolten.

A series of *Cheilea* in the South Australian Museum from the Northern Territory agree fairly well with the figure and description of *Calyptraea dormitoria* Reeve, from the Philippines, a synonym of *Cheilea undulata*, though the Australian specimens have more delicate radial sculpture. A series of Queensland specimens are even more delicately sculptured. The specimens from Queensland recall the Tertiary fossil *Cheilea plumea* Laws from New Zealand.

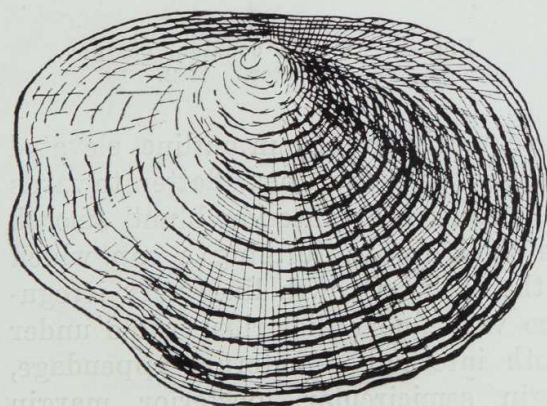
*Cheilea flindersi*.

Fig. 1.—*Cheilea flindersi*, sp. nov.  
— dorsum. × 1.

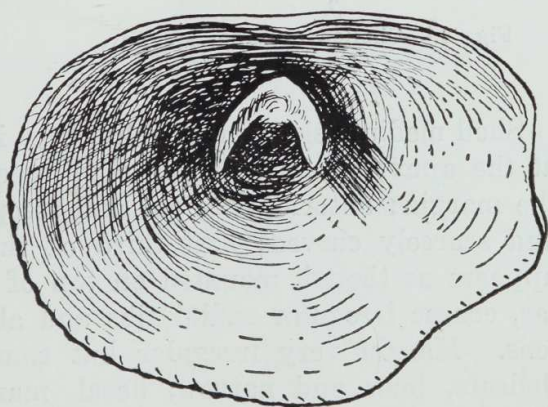


Fig. 2.—*Cheilea flindersi*, sp. nov.  
— venter. × 1.

Shell large, fairly solid, semicircular in outline, irregular, elevated; posterior slope convex, anterior steeper and straighter; apex nearer anterior end, only slightly curved; pure white colour with but a slight yellow tinge;

(1) Proc. Royal Soc. Vict. N.S. XII., pt. 2, p. 198, 1899.

(2) Proc. Linn. Soc. N.S.W., pt. 3, p. 309, 1923.

(3) Mon. Conch. XIII., p. 137, 1886.

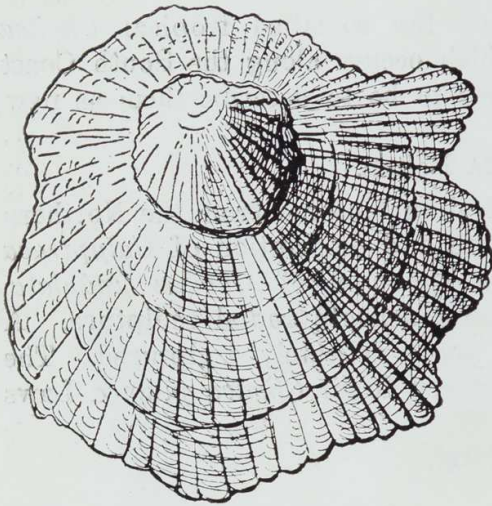
(4) Carnegie Inst. Wash. Pub. No. 385, p. 374, 1928.

surface covered with strong irregular growth lines, breaking the fine flexuous close-set radials; margin irregular, finely denticulate within. Internal appendage long, delicate, narrow, convex in front, basal margin semicircular, posterior margins slightly thickened. Holotype; height 22 mm.; diameter major 53 mm., minor 39 mm.; Daly Head, Spencer Gulf, South Australia (Dr. Torr) Reg. No. D.11290, S.A.M.

*Location*: South Australia:—Spencer Gulf, Gulf St. Vincent, St. Francis Island beach, Beachport 25,110 fathoms, 150 fathoms; Neptune Island 45 fathoms; Midchannel between Cape Borda and Wedge Island 60 fathoms, Victoria:—Port Philip.

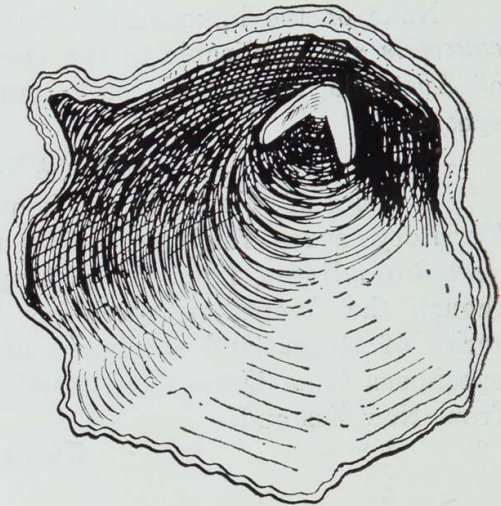
The large species is readily distinguishable from the tropical *Cheila* by the size and rugged irregular growth lines. The shape is variable, the basal margin being sometimes almost circular.

### *Cheilea occidua*.



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Fig. 3.—*Cheilea occidua*, sp. nov.  
— dorsum.  $\times 2$ .



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Fig. 4.—*Cheilea occidua*, sp. nov.  
— venter.  $\times 2$ .

Shell medium size, rather solid, very irregularly circular in outline, elevated at the apex; posterior slope slightly convex near the apex, flatter towards the margin; anterior straight and steep. Apex near anterior, blunt, smooth and scarcely curved; first third of the shell always forming a cap which appears as though mounted on top of the shell. Growth lines very irregular, coarse irregular radial ribs and also very fine radial ribs visible under lens. Margin very irregular but smooth internally. Internal appendage, delicate, long and narrow, basal margin semicircular, posterior margin slightly thickened. Holotype; height 11 mm.; both diameters 25 mm.; Ellensbrook, Western Australia (Sir J. C. Verco), Reg. No. D.11291, S.A.M.

*Localities*: Esperance, Hopetoun, Albany, Ellensbrook, Yallingup, Hopetoun 35 fathoms. Of fifty specimens taken at Ellensbrook the largest does not reach half the size of *C. flindersi*. The Western Australian species is easily distinguished from the South Australian by the smaller size, the coarse radial ribs and the peculiar "capping" of the early shell.